

Title (en)

Thin film polymer electrolyte fuel cell and method of operating the same

Title (de)

Dünnschicht-Polymerelektrolytbrennstoffzelle und deren Betriebsverfahren

Title (fr)

Pile à combustible à électrolyte polymère en couche mince et sa méthode de fonctionnement

Publication

EP 1294039 B1 20100113 (EN)

Application

EP 02707165 A 20020326

Priority

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- JP 2001096953 A 20010329

Abstract (en)

[origin: EP1294039A1] It is difficult to realize a small fuel cell capable of being installed in mobile device by merely downsizing a conventional fuel cell without changing the configuration. The present invention provides a small fuel cell employing a polymer electrolyte thin film, by using a semiconductor process. A polymer electrolyte thin film fuel cell in accordance with the present invention comprises: a substrate having a plurality of openings; an electrolyte membrane-electrode assembly formed on the substrate so as to cover each of the openings, the assembly comprising a first catalyst electrode layer, a hydrogen ion conductive polymer electrolyte membrane and a second catalyst electrode layer which are formed successively; and fuel and oxidant supply means for supplying a fuel or an oxidant gas to the first catalyst electrode layer through the openings, and an oxidant gas or a fuel to the second catalyst electrode layer. <IMAGE>

IPC 8 full level

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